

## CLAIMS

What is claimed is:

1. A method for automatically detecting and diagnosing impairment in a communication service, the method comprising:
  - a) detecting events that occur in a plurality of in domain communication channels where each channel is used by a communication service; and
  - b) determining the probability of each of a plurality of possible causes as being a cause of interference in a victim channel, by propagating observations of the interference backwards through a Bayesian Belief Network (BBN) which defines a probabilistic cause-effect relationship between each cause and each effect.

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